

TECHNOLOGY NEEDS/OPPORTUNITIES STATEMENT

DRUM VENTING

Identification No.: RL-MW034

Date: October 2001

Program: Waste Management

OPS Office/Site: Richland Operations Office/Hanford Site

PBS No.: RL-CP02

Waste Stream: 1561 – CH TRU Suspect Drums

TSD Title: NA

Operable Unit (if applicable): N/A

Waste Management Unit (if applicable): N/A

Facility: NA

Priority Rating:

This entry addresses the “Accelerated Cleanup: Paths to Closure (ACPC)” Priority:

- ☐ 1. Critical to the success of the ACPC
- ☒ 2. Provides substantial benefit to ACPC projects (e.g., moderate to high lifecycle cost savings or risk reduction, increased likelihood of compliance, increased assurance to avoid schedule delays)
- ☐ 3. Provides opportunities for significant, but lower cost savings or risk reduction, and may reduce uncertainty in ACPC project success.

Need Title: Drum Venting

Need/Opportunity Category: *Technology Need* --There is no existing or currently identified technology capable of solving the site’s problem (i.e., technology gap exists, no baseline approach has been identified).

Need Description: There is a technology need for field venting of potentially pressurized drums. As retrieval of stored drums gets underway next FY, there will be a need to safely handle drums that were stored without vents installed. An existing technology used at other sites requires transport of the suspect drums to a bomb-proof enclosure for breaching. This approach is extremely expensive, both in hardware (about \$2M), and inefficient operations (about 4 hours per drum to vent and return). An unsolicited concept has been offered by Vista Engineering that shows promise of a much simpler and cheaper system. The concept will be further developed to solicit support from EM technology programs.

Schedule Requirements:

Earliest Date Required: 1/31/02

Latest Date Required: 9/30/02

January 31, 2002 is the date for starting readiness activities for TRU retrieval. September 30, 2002 is when retrieval is expected to be underway.

Problem Description: Drums without vents could over-pressurize and cause loss of contamination control and injury, so a method of venting is required in order to retrieve the drums. The existing technology used elsewhere is both expensive and inefficient.

Potential Life-Cycle Cost Savings of Need (in \$000s) and Cost Savings Explanation:
N/A

Benefit to the Project Baseline of Filling Need: Will allow drum retrieval, on schedule.

Relevant PBS Milestone: N/A

Functional Performance Requirements:

<i>Work Breakdown Structure (WBS) No.:</i>	<i>TIP No.:</i>
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1.2.2	Candidate
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Justification For Need:

Technical: Venting is required to prevent over-pressurization

Regulatory: N/A

Environmental Safety & Health: Potential issues with contamination control and injury if drums are not vented.

Cultural/Stakeholder Concerns: TBD

Other: None identified.

Current Baseline Technology:

End-User: Waste Management.

Contractor Facility/Project Manager: Doug Greenwell, Fluor Hanford, Inc. (FH), (509) 372-1123, Fax (509) 373-1091, Doug_Greenwell@rl.gov

Site Technical Point-of-Contact: Dale Black, Fluor Hanford, Inc. (FH), (509) 376-8458, Fax (509) 372-1441, [Dale G Black@rl.gov](mailto:Dale_G_Black@rl.gov).

DOE End-User/Representative Point-of-Contact: Kevin Leary, DOE-RL, (509) 373-7285, Fax (509) 372-1926, [Kevin D Leary@rl.gov](mailto:Kevin_D_Leary@rl.gov).

Waste volume, m ³	Current: N/A; Forecasted (5 yrs): 2,160 m ³
Waste form	Drummed waste
Waste stream I.D.	1561
Contaminants and co-contaminants	TBD
Function of technology	Create a simpler and cheaper method for venting drums
Source category	Various Hanford Site programs